



GROUP
TRA

MODEL
All Models
w/6 Spd. A/T
Exc. Optima Hybrid

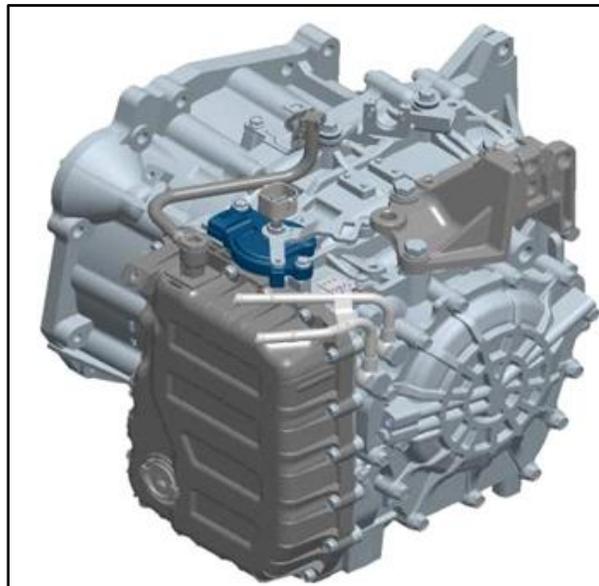
NUMBER
051 (Rev 1, 05/22/2015)

DATE
May 2014

TECHNICAL SERVICE BULLETIN

SUBJECT: 6 SPD A/T SOLENOID REPLACEMENT – MULTIPLE DTCS

This bulletin provides information relating to the replacement of various shift solenoids on 6-speed automatic transaxles with DTCs P0741, P0743, P0748, P0753, P0758, P0763, P0768, P0773, P1778 and P2709. Replace the solenoids if current or history codes are present; Do not replace the transaxle. To reduce vehicle repair time, this procedure can be performed with the transaxle installed in the vehicle. Refer to KGIS for solenoid pack removal and reinstallation procedures for the specific year and model of the vehicle.



File Under: Transmission

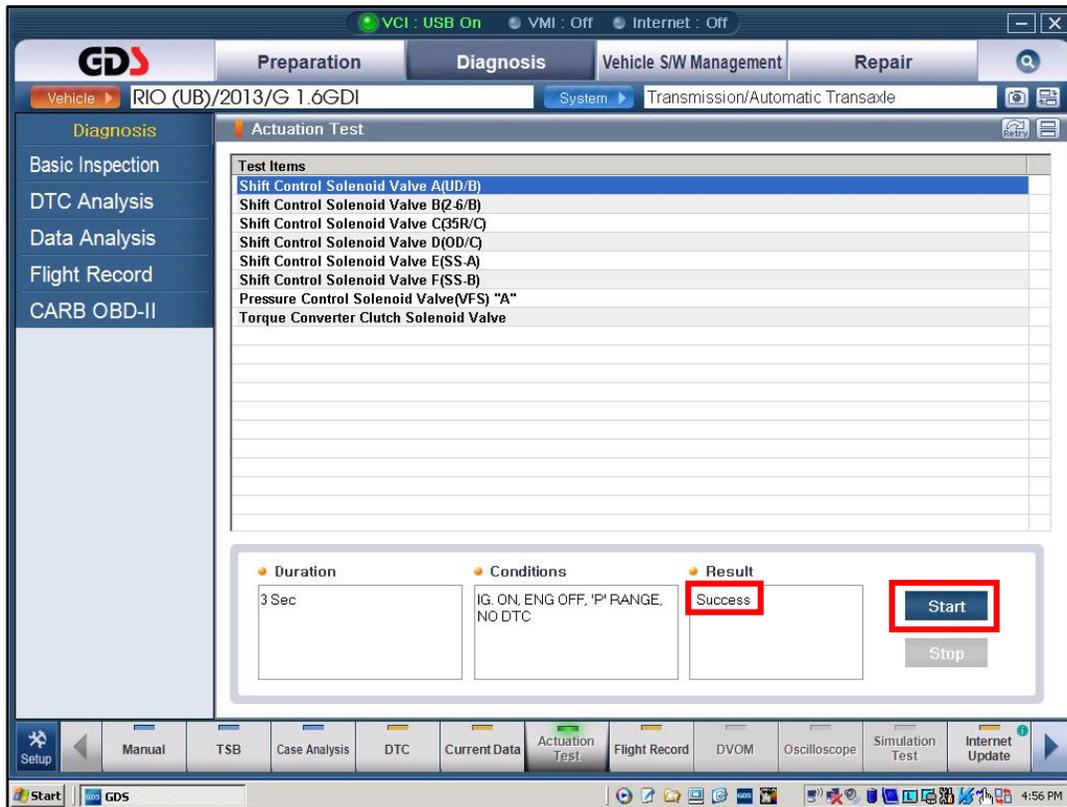
Circulate To: General Manager Service Manager Parts Manager
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Service Procedure:

1. Using GDS, check for DTC in the “Automatic Transaxle” menu. **Record the DTC and description.** Delete the DTC.
2. From GDS, select the following parameters: Vehicle and A/T menu > “Actuation Test”

Press the “Start” button and check the “Result” box for a message indicating “Success”.



3. If the test results show:
 - “Success” – GDS requested the TCM to activate the solenoids. Use chassis ears or stethoscope to listen for solenoid operation. If the solenoids are audible, the harness currently has no open/short circuit. Proceed to Step 5.
 - “Failure” - The GDS did not request the TCM to activate the solenoids. Proceed to Step 4.
4. Visually check the wiring harness between the PCM and transmission for a damaged wire or short circuit to ground. Check for a damaged pin or pin not fully inserted into the connector.
 - If damage exists, repair or replace the ECM control harness and drive the vehicle to confirm the repair.
 - If not, proceed to Step 5.

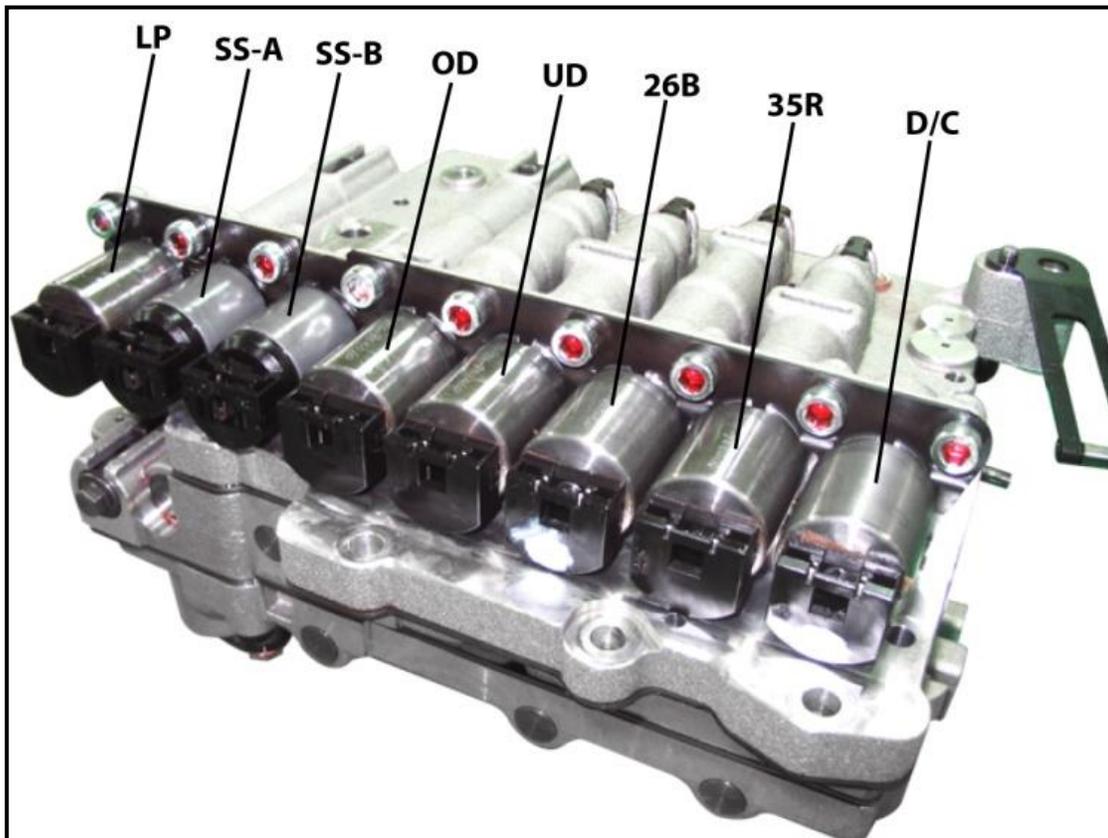
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5. Refer to the DTC recorded in Step 1 and follow the repair procedure shown below:

DTC		SOLENOID	REPAIR PROCEDURE
P0743	D/C	Torque converter (T/C)	Replace harness between PCM and solenoid harness. Go to Step 6 and replace the related solenoids.
P1778	D/C	Engine clutch solenoid (HEV)	
P0741	D/C	Torque converter clutch system (T/C)	
P0763	35R	Shift solenoid C (35R)	
P0758	26B	Shift solenoid B (26-B)	
P0753	UD	Shift solenoid A (UD)	
P0768	OD	Shift solenoid D (OD)	
P2709	SS-B	Shift solenoid F (SS-B)	
P0773	SS-A	Shift solenoid E (SS-A)	
P0748	LP	LP solenoid	

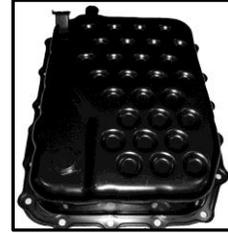
6. Refer to KGIS for solenoid pack removal and reinstallation procedures for the specific year and model of the vehicle.

**Sample of Rio (UB) 6 spd A/T Solenoid Pack
(For reference purposes only)**



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Apply Kia RTV Silicone Gasket Maker (P/N UM010 CH046) to the oil pan and reinstall it.

**• PLASTIC OIL PAN:**

Install a new gasket to the oil pan and reinstall it.



8. For Idle Stop and Go (ISG) equipped vehicles, allow the vehicle to remain undisturbed for 4 hours after all repairs are complete. This will allow for the required self-recalibration of the system to take place. Otherwise, the ISG system will not operate correctly.

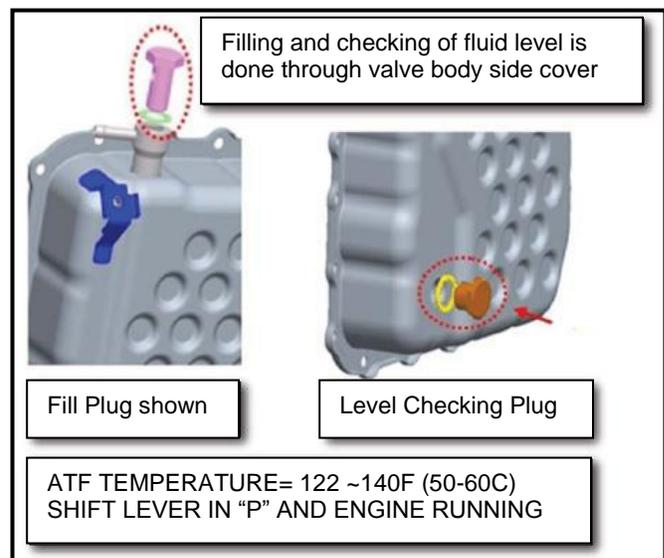
*** NOTICE**

Refer to KGIS or TSB TRA 046 for information on ATF requirements by model. Refill the transmission with the same amount of fluid as was drained during removal process.

9. • Attach the GDS to the DLC and select vehicle > A/T menu > Current Data > Oil Temperature Sensor.
- Start the engine and remove the level checking plug when the ATF is within 122°F~140°F (50~60°C). The level is correct when oil flows out of the level checking plug in a thin steady stream.

*** NOTICE**

Refer to PS171 for information on fluid level checking on vehicles equipped with plastic oil pans.



- Collect and dispose of any excess fluid in accordance with local regulations.

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10. Clear the codes and test drive the vehicle for two driving cycles (two key-on to key-off driving cycles, including 1-2-3-4-5-6 upshifts and 6-5-4-3-2-1 downshifts). If the DTC returns, perform the following repairs:

DTC	SOLENOID
P0743	<ul style="list-style-type: none"> <li data-bbox="391 520 1328 621">• Replace the control wiring harness between the PCM and transmission. If the solenoid DTCs do not return, release the vehicle to the customer. <li data-bbox="391 695 1230 730">• If any of the solenoid DTCs return again, replace the PCM.
P1778	
P0753	
P0758	
P0763	
P0768	
P0773	
P2709	
P0741	
P0748	

11. After all repairs are complete, test drive the vehicle for two driving cycles (two key-ON to key-OFF driving cycles, including 1-2-3-4-5-6 upshifts and 6-5-4-3-2-1 downshifts) to confirm the DTC no longer returns, and for proper transmission operation
12. Test drive the vehicle to confirm proper transmission operation.

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REQUIRED PARTS

Year	Model	Engine
2011~2015	Optima (TF & QF)	2.0L Theta II & 2.4L Theta II
2011~2015	Sorento (XMa)	2.4L Theta II & 3.5L Lambda II 3.3L Lambda II GDI
2012~2013	Soul (AM)	1.6L Gamma GDI & 2.0L Nu
2011~	Sportage (SL)	2.0L Theta II & 2.4L Theta II
2011~2014	Sedona (VQ)	3.5L Lambda II
2011~2013	Forte (TD) Sedan, Koup & 5-Door	2.0L Theta II & 2.4L Theta II
2011~	Rio (UB)	1.6L Gamma GDI
2014~	Cadenza (VG)	3.3L Lambda II GDI
2014~	Forte (YD)	2.0L Theta II & 1.6L Gamma Turbo
2014~	Soul (PS)	2.0L Theta II & 1.6L Gamma GDI
2015~	Sedona (YP)	3.3L Lambda II GDI
2016~	Sorento (UMa)	2.0L Theta II-i 2.4L Theta II GDI 3.3L Lambda 2 GDI

REQUIRED PARTS

Refer to Electronic Parts Catalog (EPC).

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WARRANTY INFORMATION:

Model	N Code	C Code	Repair Desc.	Labor Op Code	Op Time
AM	N94	C15	6-SPEED A/T REPAIR	46313F00	1.2
PS					1.2
TD					1.2
UB					1.2
SL					1.4
QF / TF					1.5
YD					1.5
VG					1.6
XM					1.8
VQ					2.8
YP				45613R00	2.8
UM					1.8